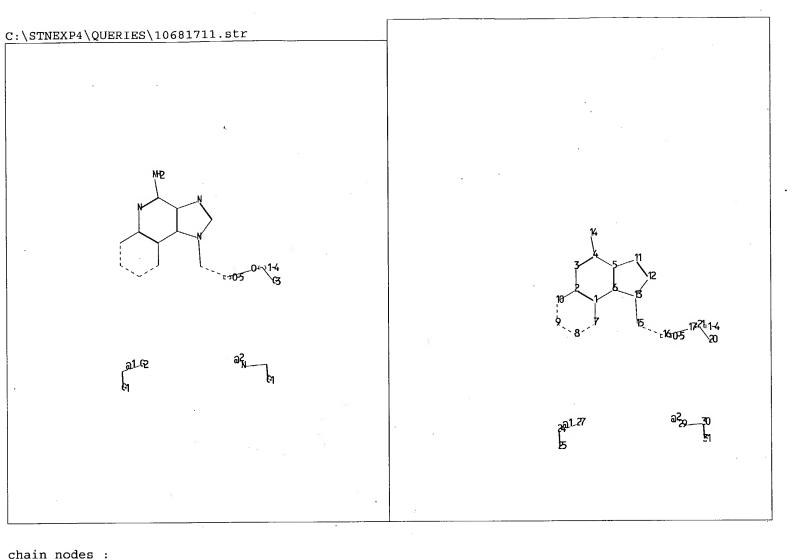
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L1
                5 S L1
L2
               95 S L1 SSS FULL
1.3
      FILE 'CAPLUS' ENTERED AT 18:51:01 ON 11 MAY 2004
L4
=> d 1-10 bib abs hitstr
L4
     ANSWER 1 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
     2004:331904 CAPLUS
AN
     Immune response modifier-antigen immunostimulatory compositions and
ΤI
      methods of stimulating an immune response
ΤN
     Kedl, Ross M.; Griesgraber, George W.; Zarraga, Isidro Angelo E.
      3M Innovative Properties Company, USA
PA
     PCT Int. Appl., 56 pp.
SO
     CODEN: PIXXD2
DT
      Patent
     English
LA
FAN. CNT 1
      PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
                                _____
РΤ
     WO 2004032829
                          A2
                               20040422
                                                WO 2003-US25523 20030814
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
               LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
               PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG,
               KZ, MD, RU, TJ
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
              CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

-403846P P 20020815
PRAI US 2002-403846P P
      The invention provides immunostimulatory compns. that include an immune
      response modifier (IRM) portion (e.g. an imidazoquinoline derivative) paired
      with an antigenic portion (e.g. ovalbumin). Preparation of IRM derivs., e.g.
      I, is included.
     INDEXING IN PROGRESS
      680987-05-7P 680987-06-8P
      RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
      (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
         (immune response modifier-antigen immunostimulatory compns., preparation,
         and methods use)
      680987-05-7 CAPLUS
RN
      INDEX NAME NOT YET ASSIGNED
```



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14 15 16 17 20 21 24 25 27 29 30 31
ring nodes:
    1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds:
    4-14 13-15 15-16 16-17 17-21 20-21 24-25 24-27 29-30 30-31
ring bonds:
    1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 5-11 6-13 7-8 8-9 9-10 11-12 12-13
exact/norm bonds:
```

1-7 2-10 4-14 5-11 6-13 7-8 8-9 9-10 11-12 12-13 13-15 15-16 16-17 17-21 20-21 24-25 24-27 29-30 30-31

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

G1:S,O

G2:0,S,N

G3:[\*1],[\*2]

Match level:
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:CLASS 15:CLASS 16:CLASS 17:CLASS 20:CLASS 21:CLASS 24:CLASS
25:CLASS 27:CLASS 29:CLASS 30:CLASS 31:CLASS

RN 680987-06-8 CAPLUS CN INDEX NAME NOT YET ASSIGNED

IT 436856-98-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(immune response modifier-antigen immunostimulatory compns., preparation, and methods use)

RN 436856-98-3 CAPLUS

CN Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \text{H} \\ \text{t-BuO-C-NH-CH}_2 - \text{CH}_2 - \text{O-CH}_2 - \text{CH}_2 \\ \text{MeO-CH}_2 - \text{CH}_2 \\ \text{N} \\ \text{NH}_2 \\ \end{array}$$

```
ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
ΑN
     2004:291951 CAPLUS
     140:321358
DN
     Preparation of imidazo[4,5-c]quinoline dimers as immune response modifiers
IN
     Griesgraber, George W.
     3M Innovative Properties Company, USA
PA
     PCT Int. Appl., 71 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
                                                APPLICATION NO.
                                                                  DATE
     PATENT NO.
                        KIND DATE
                                                _____
                                                WO 2003-US30372 20030925
     WO 2004028539
                         A2
                               20040408
PI
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
```

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,

GW, ML, MR, NE, SN, TD, TG PRAI US 2002-413848P P 20020926

GΙ

$$R^3$$
 $N^{H_2}$ 
 $N^{H_2}$ 

AB Title compds. I [wherein R2 = H, (un)substituted alkyl, alkenyl, (hetero)aryl, etc.; R3, R4 = independently H, halo, alkyloxy, alkenyl, alkylthio, amino, or R3R4 = (un)substituted (hetero)aryl ring; A = alkylene, alkenylene, alkynylene, etc.; and pharmaceutically acceptable

II

CN

salts thereof], and analogs (4 addnl. Markush structures), were prepared as immune response modifiers. For example, reaction of 1-(4-aminobutyl)-2-butyl-1H-imidazo[4,5-c]quinolin-4-amine with 1,3-phenylene diisocyanate in CH2Cl2 under N2 at r.t., gave II as a white solid. II stimulated interferon  $\alpha$  and tumor necrosis factor (TNF- $\alpha$ ) biosynthesis in human blood cell at concentration of less than or equal to 10  $\mu\text{M}$ . Thus, I and their pharmaceutical compns. induce cytokines biosynthesis and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

r 677354-10-8P 677354-11-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of imidazo[4,5-c]quinoline dimers as immune response modifiers)

RN 677354-10-8 CAPLUS

1,3-Benzenedicarboxamide, N,N'-bis[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

677354-11-9 CAPLUS

16-Oxa-2,11,13-triazaoctadecanamide, 18-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-12-oxo- (9CI) (CA INDEX NAME)

ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN L4

ΑN 2003:892446 CAPLUS

139:364934 DN

Preparation of aryl ether substituted imidazoquinolines as immune response ΤI modifiers

Heppner, Philip D.; Charles, Leslie J.; Dellaria, Joseph F.; Merrill, IN Bryon A.; Mickelson, John W.

3M Innovative Properties Co., USA PΑ

U.S. Pat. Appl. Publ., 97 pp., Cont.-in-part of U.S. Ser. No. 13,202. SO

CODEN: USXXCO

Patent

LA: English

FAN.CNT 11						
		PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	ΡI	US 2003212092	A1	20031113	US 2002-165750	20020607
		US 6677348	В2	20040113		
		US 2003212091	A1	20031113	US 2001-13202	20011206
		US 6670372	B2	20031230		
		US 2004072858	A1	20040415	US 2003-675833	20030930
	PRAI	US 2000-254218P	P	20001208		
		US 2001-13202	A2	20011206		
		US 2001-11921	A1	20011206		
	os	MARPAT 139:36493	4			
	GI					

$$NH2$$
 $NH2$ 
 $N R^2$ 
 $X-O-R^1$ 

Ι

The title compds. [I; X = (CH2)2, CHEtCH2, etc.; R1 = alkenyl, aryl, R4-aryl; R2 = H, alkyl, alkenyl, etc.; R4 = alkyl, alkenyl which may be AB interrupted by one or more O atoms; R3 = H, alkyl; n = 0-4; R = alkyl, alkoxy, OH, etc.] that contain ether and aryl or alkenyl functionality at the 1-position, and are useful as immune response modifiers, were prepared E.g., a multi-step synthesis of I [X = (CH2)2; R1 = CH2C.tplbond.CH; R2 =H; n = 0] which showed the lowest effective concentration of 0.12  $\mu M$  and 1.11  $\mu M$  to induce biosynthesis of interferon  $\alpha$  and  $TNF\alpha$  in human cells, resp., was given. The compds. I can induce the biosynthesis of various cytokines and are useful in the treatment of a variety of

CN

conditions including viral diseases and neoplastic diseases. The pharmaceutical composition comprising the compound I is claimed.

IT 437601-48-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation of aryl ether substituted imidazoquinolines as immune response modifiers)

RN

437601-48-4 CAPLUS
Acetic acid, [2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)butoxy]-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 436855-99-1 CMF C17 H20 N4 O3

CM2

CRN 76-05-1 CMF C2 H F3 O2

L4 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

2003:777397 CAPLUS

139:292250 DN

Preparation of amido ether substituted imidazoquinolines as immune ΤI response modifiers

INCrooks, Stephen L.; Griesgraber, George W.; Heppner, Philip D.; Merrill, Bryon A.

PΑ 3M Innovative Properties Co., USA

U.S. Pat. Appl. Publ., 50 pp., Cont.-in-part of U.S. Ser. No. 11,670. SO CODEN: USXXCO

DTPatent

LA English				
FAN.CNT 11				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003187016	6 A1	20031002	US 2002-165449	20020607
US 6664265	B2	20031216		
US 2003096835	5 A1	20030522	US 2001-11670	20011206
US 6660747	B2	20031209		
US 2004072858	3 A1	20040415	US 2003-675833	20030930
US 2004067975	5 A1	20040408	US 2003-681711	20031007
PRAI US 2000-25421	L8P P	20001208		
US 2001-11670	) A2	20011206		
US 2001-11921	L A1	20011206		
US 2002-16544	19 A1	20020607		
OS . MARPAT 139:29	92250			

GΙ

$$R_n$$
 $NH2$ 
 $NH2$ 

The title compds. [I; X = (CH2)2, CH(Et)CH2, etc.; Rl = (CH2)4CONMePh, (CH2)2NHCO(cyclohexyl), (CH2)2NHCO(1-naphthyl), etc.; R2 = H, alkyl, alkenyl, etc.; R = alkyl, alkoxy, OH, halo, CF3; n = 0-4) and their pharmaceutically acceptable salts that contain ether and amide functionality at the 1-position, and are useful as immune response modifiers, were prepared Thus, reacting 2-(1H-imidazo[4,5-c]quinolin-1-yl)ethanol with 5-bromo-N-methyl-N-phenylpentamide followed by treatment of the resulting N-oxide with trichloroacetyl isocyanate in CH2Cl2, and then treating the intermediate with NaOMe in MeOH afforded I [X = (CH2)2; R1 = (CH2)4CONMePh; R2 = H; n = 0] which showed interferon  $\alpha$  induction in human cells at 3.33  $\mu$ M. The compds. I and compons. comprising I can induce the biosynthesis of various cytokines, and are useful in the treatment of a variety of conditions, including viral diseases and neoplastic diseases.

IT 436855-82-2P 436855-84-4P 436855-87-7P 436855-91-3P 436855-91-3P 436855-95-7P 436855-97-9P 436855-99-1P 436856-00-7P 436856-01-8P 436856-02-9P 436856-03-0P 436856-04-1P 436856-08-5P 436856-06-3P 436856-07-4P 436856-08-5P 436856-10-9P 436856-11-0P 436856-12-1P 436856-13-2P 436856-11-0P 436856-15-4P 436856-16-5P 436856-17-6P 436856-18-7P 436856-16-5P 436856-42-7P 436856-40-1P 436856-42-7P 436856-44-9P 436856-46-1P 436856-48-3P 436856-52-9P 436856-54-1P 436856-60-9P 436856-60-7P 436856-64-3P 436856-60-9P 43

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of amido ether substituted imidazoquinolines as immune response modifiers)

RN 436855-82-2 CAPLUS

CN Benzamide, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436855-84-4 CAPLUS

CN Benzamide, N-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1Himidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ || \\ Ph-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ \\ MeO-CH_2-CH_2 \\ || \\ N \\ NH_2 \\ \end{array}$$

RN 436855-87-7 CAPLUS

CN Benzamide, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

RN 436855-91-3 CAPLUS

CN Benzamide, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

RN 436855-95-7 CAPLUS

CN Pentanamide, 5-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]-N-methyl-N-phenyl-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} Ph & O \\ & \parallel & \parallel \\ Me-N-C- (CH_2)_4-O-CH_2-CH_2 \\ & \parallel & \parallel \\ N-& \parallel & \parallel \\ N-& \parallel & \parallel \\ N+& \parallel & \parallel & \parallel \\ N+& \parallel & \parallel \\ N+& \parallel & \parallel & \parallel \\ N+&\parallel &\parallel & \parallel & \parallel \\ N+&\parallel & \parallel & \parallel \\ N+&\parallel &\parallel &\parallel &\parallel &\parallel \\ N+&\parallel &\parallel &\parallel &\parallel &\parallel \\ N+&\parallel &\parallel &\parallel &\parallel$$

RN 436855-97-9 CAPLUS

CN Pentanamide, 5-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]-N-butyl-N-phenyl- (9CI) (CA INDEX NAME)

## 10681711

436855-99-1 CAPLUS RN

Acetic acid, [2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)butoxy]-, methyl ester (9CI) (CA INDEX NAME)

RN 436856-00-7 CAPLUS

Cyclopropanecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

PAGE 1-A

PAGE 2-A

NH2

436856-01-8 CAPLUS

RN Pentanamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo(4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) 10681711

436856-02-9 CAPLUS RN

Cyclopentanecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN

436856-03-0 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

$$\begin{array}{c} O \\ \parallel \\ Ph-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ n-Bu \\ \parallel \\ N \\ NH_2 \end{array}$$

RN 436856-04-1 CAPLUS CN Cyclohexanecarboxamide, N-{2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 436856-05-2 CAPLUS

CN Benzeneacetamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \circ \\ \parallel \\ \text{Ph-CH}_2-\text{C-NH-CH}_2-\text{CH}_2-\text{O-CH}_2-\text{CH}_2\\ \text{n-Bu} \\ \parallel \\ \text{N} \\ \end{array}$$

RN 436856-06-3 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-fluoro- (9CI) (CA INDEX NAME)

RN CN

436856-07-4 CAPLUS 2-Thiopheneacetamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN

436856-08-5 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-cyano- (9CI) (CA INDEX NAME) CN

PAGE 1-A

PAGE 2-A

436856-09-6 CAPLUS RN

Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-cyano- (9CI) (CA INDEX NAME) CN

436856-10-9 CAPLUS RN

Benzenepropanamide, N-[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

$$\begin{array}{c} O \\ \parallel \\ Ph-CH_2-CH_2-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ \hline \\ n-Bu \\ N \\ \hline \\ NH_2 \end{array}$$

RN

436856-11-0 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-methoxy- (9CI) (CA INDEX NAME) CN

436856-12-1 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-methoxy- (9CI) (CA INDEX NAME) RN CN

CN

PAGE 2-A

RN

436856-13-2 CAPLUS
3-Pyridinecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-6-chloro- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 436856-14-3 CAPLUS

Cyclopropanecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-2-phenyl-, (1R,2R)-rel- (9CI) (CA INDEX CN NAME)

Relative stereochemistry.

RN

436856-15-4 CAPLUS
Acetamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME) CN

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{Ph-CH}_2-\text{O-CH}_2-\text{C-NH-CH}_2-\text{CH}_2-\text{O-CH}_2-\text{CH}_2\\ \text{n-Bu} \\ \parallel \\ \text{N} \end{array}$$

436856-16-5 CAPLUS

1-Naphthalenecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

RN

436856-17-6 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-(trifluoromethyl)- (9CI) (CA INDEX NAME) CN

PAGE 1-A

(

PAGE 2-A

RN

436856-18-7 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-(trifluoromethyl)- (9CI) (CA INDEX NAME) CN

RN 436856-19-8 CAPLUS
CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-(trifluoromethoxy)- (9CI) (CA INDEX NAME)

RN 436856-42-7 CAPLUS

CN Pentanamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl](9CI) (CA INDEX NAME)

$$\begin{array}{c} \circ \\ \parallel \\ n-\mathsf{Bu}-\mathsf{C}-\mathsf{NH}-\mathsf{CH}_2-\mathsf{CH}_2-\mathsf{O}-\mathsf{CH}_2-\mathsf{CH}_2 \\ \downarrow \\ \mathsf{N} \\ \mathsf{NH}_2 \end{array}$$

RN 436856-44-9 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-(9CI) (CA INDEX NAME)

RN 436856-46-1 CAPLUS

CN Cyclohexanecarboxamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-48-3 CAPLUS
CN Benzeneacetamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-50-7 CAPLUS
CN 2-Thiopheneacetamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

436856-52-9 CAPLUS RN

 $\label{eq:Benzamide} Benzamide, \ N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-line (A-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-line (A-amino-1H-imidazo[4,5-c]quinoline (A-amino-1H-imidazo[4,5-c]quino-1H-imidazo[4,5-c]quinoline (A-amino-1H-imidazo[4,5$ CN cyano- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 436856-54-1 CAPLUS

Benzenepropanamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

436856-56-3 CAPLUS RN

Benzamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-methoxy- (9CI) (CA INDEX NAME)

RN 436856-58-5 CAPLUS CN

Benzamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-4-methoxy- (9CI) (CA INDEX NAME)

RN

436856-60-9 CAPLUS
3-Pyridinecarboxamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-6-chloro- (9CI) (CA INDEX NAME) CN

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RN

436856-62-1 CAPLUS
Acetamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME) CN

2-Naphthalenecarboxamide, N- $\{2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-y1)ethoxy]ethyl]- (9CI) (CA INDEX NAME)$ CN

RN

436856-66-5 CAPLUS
Benzamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-(trifluoromethyl)- (9CI) (CA INDEX NAME) CN

PAGE 1-A

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RN 436856-68-7 CAPLUS

Benzamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-CN

(trifluoromethyl)- (9CI) (CA INDEX NAME)

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PAGE 2-A

RN 436856-70-1 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-4-(trifluoromethoxy)- (9CI) (CA INDEX NAME)

608512-33-0 CAPLUS RN

Benzamide, N-[2-[2-(4-amino-2-methyl-lH-imidazo[4,5-c]quinolin-l-methyl-l-methyl-methyl-l-methyl-l-methyl CN yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

608512-34-1 CAPLUS RN

Benzamide, N-[2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

608512-35-2 CAPLUS RN

Benzamide, N-[2-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

608512-36-3 CAPLUS

RN Cyclohexanecarboxamide, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

NH<sub>2</sub>

IT 436856-84-7P 436856-92-7P 436856-98-3P 436857-12-4P 557787-40-3P 557787-44-7P 557787-47-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of amido ether substituted imidazoquinolines as immune response modifiers)

RN 436856-84-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436856-92-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl], 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436856-98-3 CAPLUS
Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \bullet \\ \text{t-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \text{MeO-CH}_2\text{-CH}_2\\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 436857-12-4 CAPLUS
CN Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin1-yl]ethoxy]ethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 557787-40-3 CAPLUS
CN Carbamic acid, [2-[2-(4-amino-2-methyl-lH-imidazo[4,5-c]quinolin-1yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{C} \\ \text{C-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \text{Me} \\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 557787-44-7 CAPLUS
CN Carbamic acid, [2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

557787-47-0 CAPLUS RN

Carbamic acid, [2-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ \text{t-BuO-C-NH-CH}_2\text{--CH}_2\text{--O-CH}_2\text{--CH}_2\\ \text{EtO-CH}_2 \\ \parallel \\ \text{N} \\ \end{array}$$

ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN L4

2003:570648 CAPLUS AN

DN 139:133563

Preparation of sulfonamidoalkoxyalkylimidazoquinolines as immune response ΤI modulators.

Crooks, Stephen L.; Griesgraber, George W.; Heppner, Philip D.; Merrill, IN Bryon A.; Roberts, Ralph R.; Wei, Ai-Ping

3M Innovative Properties Co., USA PA

U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S. Ser. No. 12,599. SO CODEN: USXXCO

DTPatent

English LA

FAN.	CNT 11				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003139441	A1	20030724	US 2002-165443	20020607
	US 6677347	B2	20040113		
	US 2002193396	A1	20021219	US 2001-12599	20011201
	US 6683088	B2	20040127		
	US 2004072858	A1	20040415	US 2003-675833	20030930
PRAI	US 2000-254218P	P	20001208		
	US 2001-12599	A2	20011201		
	US 2001-11921	A1	20011206		
OS	MARPAT 139:13356	3			
GT					

Ι

Title compds. [I; X = CHR5, CHR5, CHR5, R1 = R4NR3SO2R6A, R4NR3SOR7, R4NR3SO2NR5R6A, R4NR3SO2NH2; A = alkyl, alkenyl, aryl, heteroaryl, heterocyclyl; R2 = H, (substituted) alkyl, alkenyl, aryl, heteroaryl, heterocyclyl, alkyl-Y-alkyl, alkyl-Y-alkenyl, alkyl-Y-aryl; Y = 0, S(0)0-2; R3 = H, alkyl, arylalkyl; R4 = alkyl, alkenyl, which may be interrupted by  $\geq 1$  O; R3R4 form a ring; R5 = H, alkyl, alkenyl; R6 = bond, alkýl, alkenyl, which may be interrupted by  $\geq 1$  O; R7 = alkyl; R3R7 form a ring; n = 0-4; R = alkyl, alkoxy, OH, halo, CF3], were prepared

Thus, tert-Bu 2-[2-[(3-aminoquinolin-4-yl)amino]ethoxy]ethylcarbamate (preparation given) in CH2Cl2 was cooled to 0° and treated with Et3N and methoxypropionyl chloride; The reaction was then warmed to room temperature and stirring was continued for 1 h to give tert-Bu 2-[2-[2-(2-methoxyethyl)-1Himidazo[4,5-c]quinolin-l-yl]ethoxy]ethylcarbamate: This was converted to N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-methoxyethyl]yl]ethoxy]ethyl]methanesulfonamide in several steps. I showed interferon induction in human cells with lowest effective concns. of 0.0001-1  $\mu\text{M}.$ 436856-84-7P 436856-92-7P, tert-Butyl IT [2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]carbamate 436856-98-3P 436857-12-4P 557787-40-3P, tert-Butyl [2-[2-(4-amino-2-methyl-1H-imidazo[4,5-c]quinolin-1yl)ethoxy]ethyl]carbamate 557787-44-7P, tert-Butyl [2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1yl)ethoxy]ethyl]carbamate 557787-47-0P, tert-Butyl [2-[2-(4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1yl)ethoxy]ethyl]carbamate RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of sulfonamidoalkoxyalkylimidazoquinolines as immune response modulators) 436856-84-7 CAPLUS RN Carbamic acid, [2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ \text{t-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \text{n-Bu} \\ N \\ N \\ \text{NH}_2 \end{array}$$

RN 436856-98-3 CAPLUS
CN Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-lH-imidazo[4,5-c]quinolin1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \text{H} \\ \text{t-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \text{MeO-CH}_2\text{-CH}_2\\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 436857-12-4 CAPLUS
CN Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin1-yl]ethoxy]ethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 557787-40-3 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-2-methyl-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 557787-44-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 557787-47-0 CAPLUS

Carbamic acid, [2-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

- L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2003:532388 CAPLUS
- DN 139:101126
- TI Preparation of 4-amino-1-(ureidoethoxyethyl)imidazoquinolines as inducers of cytokine biosynthesis for treatment of viral and neoplastic disease.
- IN Crooks, Stephen L.; Griesgraber, George W.; Heppner, Philip D.; Merrill, Bryon A.
- PA 3M Innovative Properties Co., USA
- SO U.S. Pat. Appl. Publ., 43 pp., Cont.-in-part of U.S. Ser. No. 13,060. CODEN: USXXCO
- DT Patent

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	PAT	ENT	Ν

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
PΙ	US 2003130518	A1	20030710	US 2002-164816	20020607		
	US 6660735	B2	20031209				
	US 2003158192	A1	20030821	US 2001-13060	20011206		
	US 6656938	B2	20031202				
	US 2004072858	A1	20040415	US 2003-675833	20030930		
	US 2004072859	A1	20040415	US 2003-681814	20031007		
	US 2004077678	A1	20040422	US 2003-680989	20031007		
PRAI	US 2000-254218P	P	20001208				
	US 2001-13060	A2	20011206				
	US 2001-11921	A1	20011206				
	US 2002-164816	A1	20020607				
OS	MARPAT 139:10112	6					
GI							

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\$$

RN

Ι

Title compds. [I; X = CHR5, CHR5A; A = alkylene, alkenylene; R1 = R4NR8CR3NR5ZR6A1, R4NR8CR3NR5R7, R4NR8CR3NR9ZR6A1; A1 = alkyl, alkenyl, aryl, heteroaryl, heterocyclyl; R2 = H, alkyl, alkenyl, aryl, heteroaryl, heterocyclyl, alkyl-Y-alkyl, alkyl-Y-alkenyl, alkyl-Y-aryl, alkyl, alkenyl substituted by ≥1 of: OH, halo, N(R5)2, CON(R5)2, CO-C1-10 alkyl, CO2-C1-10 alkyl, N3, aryl, heteroaryl, heterocyclyl, CO-aryl, CO-heteroaryl; R3 = O, S; R4 = alkyl, alkenyl, which may be interrupted by ≥1 O; R5 = H, C1-10 alkyl; R6 = bond, alkyl, alkenyl, which may be interrupted by a heteroatom; R7R5 = atoms to form a ring; R8 = H, C1-10 alkyl, arylalkyl; R4R8 = atoms to form a ring; R8 = H, C1-10 alkyl, arylalkyl; R4R8 = atoms to form a ring; R9 = C1-10 alkyl which can join together with R8 to form a ring; Y = O, S, SO, SO2; Z = bond, CO, SO2; n = O-4; R = C1-10 alkyl, C1-10 alkoxy, OH, halo, CF3], were prepared Thus, title compound I (R1 = morpholinocarbonylaminoethyl; X = CH2CH2; R2 = Bu; R = null) (general preparation given) induced interferon and tumor necrosis factor in human cells at lowest effective concns. of 0.0001 µM and 0.1 µM. resp.

μM, resp. 437383-04-5p, N-[2-[2-[4-Amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N'-phenylurea 437383-05-6p, N-[2-[2-[4-Amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-1H-imidazo[4,5-methoxyethyl]]c]quinolin-1-yl]ethoxy]ethyl]-N'-phenylurea 437383-06-7P, N-[2-[2-[4-Amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1yl]ethoxy]ethyl]-N-methyl-N'-phenylurea 437383-07-8P, N-[2-[2-[4-Amino-2-(2-methoxyethyl)-6,7,8,9-tetrahydro-lH-imidazo[4,5-methoxyethyl]]c]quinolin-1-yl]ethoxy]ethyl]-N-methyl-N'-phenylurea 437383-08-9P , N-[2-[2-[4-Amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1yl]ethoxy]ethyl]morpholine-4-carboxamide 437383-09-0P, N-[2-[2-[4-Amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1yl]ethoxy]ethyl]-N-methylmorpholine-4-carboxamide 437383-10-3P 437383-11-4P 437383-12-5P 437383-13-6P 437383-14-7P 437383-15-8P 437383-16-9P 437383-17-0P 437383-18-1P 437383-19-2P 437383-20-5P 437383-21-6P 437383-22-7P 437383-23-8P 437383-24-9P 437383-40-9P 437383-41-0P 437383-42-1P 437383-43-2P 437383-44-3P 437383-45-4P 437383-46-5P 437383-47-6P 557787-30-1P 557787-31-2P 557787-32-3P 557787-33-4P 557787-34-5P 557787-35-6P 557787-36-7P 557787-37-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aminoureidoethoxyethylimidazoquinolines as inducers of cytokine biosynthesis for treatment of viral and neoplastic disease) 437383-04-5 CAPLUS

Urea, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-

yl]ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \circ \\ \parallel \\ \text{PhNH-C-NH-CH}_2 - \text{CH}_2 - \text{O-CH}_2 - \text{CH}_2 \\ \text{MeO-CH}_2 - \text{CH}_2 \\ \parallel \\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 437383-05-6 CAPLUS

Urea, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ PhNH-C-NH-CH_2-CH_2-O-CH_2-CH_2\\ MeO-CH_2-CH_2 \\ \parallel \\ N \\ NH_2 \end{array}$$

RN 437383-06-7 CAPLUS

CN Urea, N-[2-[4-amino-2-(2-methoxyethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl-N'-phenyl- (9CI) (CA INDEX NAME)

RN 437383-07-8 CAPLUS

CN Urea, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl-N'-phenyl- (9CI) (CA INDEX NAME)

RN 437383-08-9 CAPLUS

CN 4-Morpholinecarboxamide, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1Himidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

N 437383-09-0 CAPLUS

CN

4-Morpholinecarboxamide, N-{2-[2-[4-amino-2-(2-methoxyethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & \text{CH}_2 \\ \text{MeO-CH}_2 - \text{CH}_2 \\ & & & \\ & & \\ & &$$

RN 437383-10-3 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl}-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ i-PrNH-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ n-Bu \\ N \\ NH_2 \end{array}$$

RN 437383-11-4 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)

RN 437383-12-5 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-butyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \text{II} \\ \text{n-BuNH-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2 \\ \text{N-Bu} \\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 437383-13-6 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

437383-14-7 CAPLUS

4-Morpholinecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

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437383-15-8 CAPLUS RN

Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxyjethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME) CN

RN 437383-16-9 CAPLUS
CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-cyanophenyl)- (9CI) (CA INDEX NAME)

RN

437383-17-0 CAPLUS
Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-methoxyphenyl)- (9CI) (CA INDEX NAME) CN

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437383-18-1 CAPLUS

Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-[(1R,2S)-2-phenylcyclopropyl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN

437383-19-2 CAPLUS Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-[4-(dimethylamino)phenyl]- (9CI) (CA INDEX NAME) CN

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437383-20-5 CAPLUS RN

Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-[3-(methylthio)phenyl]- (9CI) (CA INDEX NAME) CN

PAGE 2-A

RN

437383-21-6 CAPLUS
Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(2,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)

RN 437383-22-7 CAPLUS
CN Benzenesulfonamide, N-[[[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

RN 437383-23-8 CAPLUS
CN Benzenesulfonamide, N-[[[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]amino]carbonyl]-4-methyl- (9CI) (CA INDEX NAME)

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PAGE 2-A

 $\label{eq:benzenesulfonamide} Benzenesulfonamide, N-[[[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-l-l-lh-imidazo[4,5-c]quinolin-l-lh-imidazo[4,5-c]quinolin-lh-imidazo[4,5-c]quinolin-l-lh-imidazo[4,5-c]quinolin-lh-imidazo[4,5-c]quinolin-lh-imidazo[4,5$ yl)ethoxy]ethyl]amino]carbonyl]-4-chloro- (9CI) (CA INDEX NAME)

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437383-40-9 CAPLUS
Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME) RN CN

RN 437383-41-0 CAPLUS

Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME) CN

RN

437383-42-1 CAPLUS Urea, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME) CN

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437383-43-2 CAPLUS RN

Urea, N-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-cyanophenyl)- (9CI) (CA INDEX NAME)

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RN

437383-44-3 CAPLUS
Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-methoxyphenyl)- (9CI) (CA INDEX NAME) CN

RN

437383-45-4 CAPLUS
Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'[(1R,2S)-2-phenylcyclopropyl]-, rel- (9CI) (CA INDEX NAME) CN

Relative stereochemistry.

RN

437383-46-5 CAPLUS

Urea, N-[2-{2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl}ethoxy]ethyl]-N'(2,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME) CN

RN 437383-47-6 CAPLUS

CN Benzenesulfonamide, N-[[[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

RN 557787-30-1 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-methyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME)

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PAGE 2-A

RN

CN Urea, N-[2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

RN 557787-32-3 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 557787-33-4 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-methyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{PhNH-C-NH-CH}_2 - \text{CH}_2 - \text{O-CH}_2 - \text{CH}_2 \\ \text{Me} \\ \parallel \\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 557787-34-5 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-4-morpholinyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 557787-35-6 CAPLUS

CN Urea, N-[2-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

RN 557787-36-7 CAPLUS

CN Urea, N-[2-[2-[4-amino-2-(ethoxymethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 557787-37-8 CAPLUS

4-Morpholinecarboxamide, N-[2-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 2-A

IT 436856-84-7P 436856-92-7P 436856-98-3P 436857-12-4P 557787-40-3P 557787-44-7P 557787-47-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aminoureidoethoxyethylimidazoquinolines as inducers of cytokine biosynthesis for treatment of viral and neoplastic disease)

RN 436856-84-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436856-92-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436856-98-3 CAPLUS

CN Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436857-12-4 CAPLUS

 $\hbox{CN Carbamic acid, } \hbox{ $[2-[4-amino-2-(2-methoxyethyl)-1$H-imidazo}[4,5-c]$ quinolin-color acid, $[2-[4-amino-2-(2-methoxyethyl]-1$H-imidazo}[4,5-c]$ quinolin-color acid, $[2-[4-amino-2-(2-methoxyethyl]-1]$ quino$ 

1-yl]ethoxy]ethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 557787-40-3 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-2-methyl-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 557787-44-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-2-ethyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ \text{t-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \text{Et} \\ N \\ N \\ \text{NH}_2 \end{array}$$

RN 557787-47-0 CAPLUS

CN Carbamic acid, [2-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

- L4 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:449682 CAPLUS
- DN 137:33298
- TI Preparation of urea substituted imidazoquinoline ethers as immune response modifiers
- IN Crooks, Stephen L.; Griesgraber, George W.; Heppner, Philip D.; Merrill, Bryon A.
- PA 3M Innovative Properties Company, USA
- SO PCT Int. Appl., 71 pp.

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CODEN: PIXXD2
      Patent
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     English
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      PATENT NO.
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                                                 APPLICATION NO.
     WO 2002046191
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                                                 WO 2001-US46696 20011206
     WO 2002046191
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              FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
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              MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK,
              SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AZ, BY, KG, KZ
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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     US 6664260
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          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
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                                                EE 2003-272
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                                                NO 2003-2449
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     US 2001-11921
                               20011206
     WO 2001-US46696
                               20011206
OS
     MARPAT 137:33298
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The title compds. [I; X = (CH2)2, CHEtCH2, etc.; R1 = R4NR8CR3NR5ZR6alkyl, R4NR8CR3NR5ZR6aryl, etc.; R2 = H, alkyl, aryl, etc.; R3 = O, S; R4 = alkylene or alkenylene which may be interrupted by one or more O atoms; R5 = H, alkyl; R6 = a bond, alkylene or alkenylene which may be interrupted by one or more O atoms; R8 = H, alkyl, aralkyl; or R4 and R8 can join together to form a ring; Z = a bond, CO, SO2; n = O-4; R = alkyl, alkoxy, OH, etc.] that contain ether and urea functionality at the 1-position, and are useful as immune response modifiers, were prepared E.g., a multi-step synthesis of the urea I [X = (CH2)2; R1 = (CH2)2NMeCONHPh; R2 = (CH2)2OMe; n = O] which showed the lowest concentration of O.O1 μM and O.37 μM to induce interferon α and TNFα, resp., was prepared The compds. I can induce the biosynthesis of various cytokines and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

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IT 437383-04-5P 437383-05-6P 437383-06-7P 437383-07-8P 437383-08-9P 437383-09-0P 437383-10-3P 437383-11-4P 437383-12-5P 437383-13-6P 437383-14-7P 437383-15-8P 437383-16-9P 437383-17-0P 437383-18-1P 437383-19-2P 437383-20-5P 437383-21-6P 437383-22-7P 437383-23-8P 437383-24-9P 437383-40-9P 437383-41-0P 437383-42-1P 437383-43-2P 437383-47-6P RL: PAC (Pharmacological activity); SPI
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Ι

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of urea substituted imidazoquinoline ethers as immune response modifiers)

RN 437383-04-5 CAPLUS

CN Urea, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ PhNH-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ MeO-CH_2-CH_2 \\ \parallel \\ N \\ NH_2 \end{array}$$

RN 437383-05-6 CAPLUS

CN Urea, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1Himidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{PhNH-C-NH-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_2\\ \text{MeO-CH}_2\text{-CH}_2 \\ \parallel \\ \text{N} \\ \text{NH}_2 \end{array}$$

RN 437383-06-7 CAPLUS

CN Urea, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl-N'-phenyl- (9CI) (CA INDEX NAME)

RN 437383-07-8 CAPLUS

CN Urea, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl-N'-phenyl- (9CI) (CA INDEX NAME)

RN 437383-08-9 CAPLUS

CN 4-Morpholinecarboxamide, N-[2-[4-amino-2-(2-methoxyethyl)-1Himidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN CN

437383-09-0 CAPLUS
4-Morpholinecarboxamide, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ \text{MeO-CH}_2 - \text{CH}_2 & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

RN 437383-10-3 CAPLUS

CN Urea, N-[2-[4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(1-methylethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ i - PrNH - C - NH - CH_2 - CH_2 - O - CH_2 - CH_2 \\ - Bu \\ N \\ N \\ NH_2 \end{array}$$

RN 437383-11-4 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)

RN 437383-12-5 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-butyl- (9CI) (CA INDEX NAME)

RN 437383-13-6 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ PhNH-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ \hline \\ n-Bu \\ \parallel \\ N \\ \end{array}$$

437383-14-7 CAPLUS RN CN

4-Morpholinecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN

437383-15-8 CAPLUS
Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME) CN

PAGE 2-A

RN 437383-16-9 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-cyanophenyl)- (9CI) (CA INDEX NAME)

PAGE 2-A

RN 437383-17-0 CAPLUS CN

Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN

437383-18-1 CAPLUS
Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-[(1R,2S)-2-phenylcyclopropyl]-, rel- (9CI) (CA INDEX NAME) CN

Relative stereochemistry.

RN

437383-19-2 CAPLUS
Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-[4-(dimethylamino)phenyl]- (9CI) (CA INDEX NAME) CN

PAGE 1-A

PAGE 2-A

RN 437383-20-5 CAPLUS

Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-[3-(methylthio)phenyl]- (9CI) (CA INDEX NAME) CN

RN 437383-21-6 CAPLUS

CN Urea, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(2,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)

CN

RN 437383-22-7 CAPLUS

Benzenesulfonamide, N-[[[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

RN 437383-23-8 CAPLUS

CN Benzenesulfonamide, N-[[[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]amino]carbonyl]-4-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

- ${\tt Benzene sulfonamide, N-[[[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-l-midazo[4,5-c]quinolin$ yl)ethoxy]ethyl]amino]carbonyl]-4-chloro- (9CI) (CA INDEX NAME)
  - PAGE 1-A

PAGE 2-A

- RN
- 437383-40-9 CAPLUS

  Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME) CN

- RN 437383-41-0 CAPLUS
- Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-phenyl- (9CI) (CA INDEX NAME) CN

RN

437383-42-1 CAPLUS Urea, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-cyclohexyl- (9CI) (CA INDEX NAME) CN

PAGE 1-A

PAGE 2-A

RN

437383-43-2 CAPLUS
Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-cyanophenyl)- (9CI) (CA INDEX NAME) CN

PAGE 2-A

437383-44-3 CAPLUS
Urea, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)

RN

437383-45-4 CAPLUS
Urea, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-N'[(1R,2S)-2-phenylcyclopropyl]-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN

437383-46-5 CAPLUS Urea, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-N'-(2,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME) CN

RN 437383-47-6 CAPLUS

CN Benzenesulfonamide, N-[[[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)

## IT 436856-84-7P 436856-92-7P 436856-98-3P 436857-12-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of urea substituted imidazoquinoline ethers as immune response modifiers)

RN 436856-84-7 CAPLUS

CN

Carbamic acid, [2-[2-(4-amino-2-buty1-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ \text{t-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \\ \text{n-Bu} \\ N \\ \text{NH}_2 \end{array}$$

RN 436856-92-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436856-98-3 CAPLUS

CN Carbamic acid,  $[2-\{2-\{4-\min o-2-(2-methoxyethyl)-1H-imidazo\{4,5-c\}quinolin-1-yl\}ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)$ 

$$\begin{array}{c} \text{O} \\ \text{t-BuO-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\\ \text{MeO-CH}_2\text{-CH}_2\\ \text{N} \\ \text{NH}_2 \end{array}$$

436857-12-4 CAPLUS

Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-lH-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME) CN

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ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
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    2002:449681 CAPLUS
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ΑN

DN 137:33297

Preparation of sulfonamido ether substituted imidazoquinolines as immune ΤI response modifiers

Crooks, Stephen L.; Greisgraber, George W.; Heppner, Philip D.; Merrill, IN Bryon A.; Roberts, Ralph R.; Wei, Ai-Ping

3M Innovative Properties Company, USA

so PCT Int. Appl., 74 pp.

CODEN: PIXXD2

DT Patent

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	US 2001				11206											
	WO 2001			200	11206											
OS	MARPAT 137:33297															
GI																

AB The title compds. [I; X = (CH2)2, (CH2)3, CHEtCH2, etc.; R1 = R4NR3SO2R6alkyl, R4NR3SO2R6aryl, etc.; R2 = H, alkyl, alkenyl, etc.; R3 = H, alkyl, aralkyl; R4 = alkylene or alkenylene interrupted by one or more O atoms; or R3R4 can join together to form a ring; R6 = a bond, alkylene or alkenylene which may be interrupted by one or more O atoms; n = 0-4; R = alkyl, alkoxy, OH, etc.] that contain substituted amine functionality at the 1-position, and are useful as immune response modifiers, were prepared E.g., a multi-step synthesis of I [X = (CH2)2; R1 = (CH2)2NMeSO2Me; R2 = (CH2)2OMe; n = 0] which showed the lowest concentration of 0.01 μM and 0.12 μM to induce interferon α and TNFα, resp., was given. The compds. I can induce the biosynthesis of various cytokines and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

436856-84-7P 436856-92-7P 436856-98-3P

436857-12-4P

RN

CN

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of sulfonamido ether substituted imidazoquinolines as immune response modifiers)

436856-84-7 CAPLUS

Carbamic acid, [2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ \text{t-BuO-C-NH-CH}_2 - \text{CH}_2 - \text{O-CH}_2 - \text{CH}_2 \\ \text{n-Bu} \\ N \\ N \\ \text{NH}_2 \end{array}$$

RN 436856-92-7 CAPLUS

CN Carbamic acid, [2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

RN 436856-98-3 CAPLUS

CN Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

CN

RN 436857-12-4 CAPLUS

Carbamic acid, [2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

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L4 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
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AN 2002:449680 CAPLUS

DN 137:33296

TI Preparation of aryl ether substituted imidazoquinolines as immune response modifiers

IN Charles, Leslie J.; Dellaria, Joseph F.; Heppner, Philip D.; Merrill, Bryon A.; Mickelson, John W.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 184 pp.

CODEN: PIXXD2

DT Patent

English FAN.CNT 11 PATENT NO. KIND DATE APPLICATION NO. DATE PΙ WO 2002046189 20020613 WO 2001-US46581 20011206 WO 2002046189 A3 20030320 AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20020618 AU .2002039516 A5 AU 2002-39516 20011206 US 2003065005 A1 20030403 US 2001-11921 20011206 US 6664260 20031216 B2 EP 1341789 20030910 EP 2001-987282 20011206 A2 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR EE 200300270 20031015 EE 2003-270 20011206 Α NO 2003002452 20030716 NO 2003-2452 20030528 Α US 2004072858 A1 20040415 US 2003-675833 20030930 PRAI US 2000-254218P Ρ 20001208 US 2001-11921 20011206 A1. WO 2001-US46581 W 20011206 OS MARPAT 137:33296

$$NH_2$$
 $NH_2$ 
 $N$ 
 $R^2$ 
 $X-0-R^1$ 

Ι

The title compds. [I; X = (CH2)2, CHEtCH2, etc.; R1 = alkenyl, aryl, R4-aryl; R2 = H, alkyl, alkenyl, etc.; R4 = alkyl, alkenyl which may be interrupted by one or more O atoms; R3 = H, alkyl; n = 0-4; R = alkyl, alkoxy, OH, etc.] that contain ether and aryl or alkenyl functionality at the 1-position, and are useful as immune response modifiers, were prepared E.g., a multi-step synthesis of I [X = (CH2)2; R1 = CH2C.tplbond.CH; R2 = H; n = 0] which showed the lowest concentration of 0.12  $\mu$ M and 1.11  $\mu$ M to induce interferon  $\alpha$  and  $TNF\alpha$ , resp., was given. The compds. I can induce the biosynthesis of various cytokines and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

IT 437601-48-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aryl ether substituted imidazoquinolines as immune response  ${\sf modifiers}$ )

RN 437601-48-4 CAPLUS

CN Acetic acid, [2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)butoxy]-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 436855-99-1 CMF C17 H20 N4 O3

CM 2

CRN 76-05-1 CMF C2 H F3 O2

- L4 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
- AN 2002:449679 CAPLUS
- DN 137:33295
- TI Preparation of amido ether substituted imidazoquinolines as immune response modifiers
- IN Crooks, Stephen L.; Griesgraber, George W.; Heppner, Philip D.; Merrill, Bryon A.

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3M Innovative Properties Company, USA
     PCT Int. Appl., 79 pp.
     CODEN: PIXXD2
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     Patent
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                        KIND DATE
                                                APPLICATION NO. DATE
     PATENT NO.
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                               20020613
                                                WO 2001-US46359
                                                                   20011206
     WO 2002046188
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                               20030313
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                         A3
              AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,
              FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
              KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK,
              SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM,
          AZ, BY, KG, KZ
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
              CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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                                                AU 2002-32482
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     US 6664260
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                                                EP 2001-992005
     EP 1341792
                          A2
                               20030910
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
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PRAI US 2000-254218P
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     US 2001-11921
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     WO 2001-US46359
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                                20011206
     MARPAT 137:33295
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GT

The title compds. [I; X = (CH2)2, CH(Et)CH2, etc.; R1 = (CH2)4CONMePh, (CH2)2NHCO(cyclohexyl), (CH2)2NHCO(1-naphthyl), etc.; R2 = H, alkyl, alkenyl, etc.; R = alkyl, alkoxy, OH, halo, CF3; n = 0-4] and their pharmaceutically acceptable salts that contain ether and amide functionality at the 1-position, and are useful as immune response modifiers, were prepared Thus, reacting 2-(1H-imidazo[4,5-c]quinolin-1-yl)ethanol with 5-bromo-N-methyl-N-phenylpentamide followed by treatment of the resulting N-oxide product with trichloroacetyl isocyanate in CH2Cl2, and then treating the intermediate with NaOMe/MeOH afforded I [X = (CH2)2; R1 = (CH2)4CONMePh; R2 = H; n = 0] which showed interferon  $\alpha$  induction at 3.33  $\mu$ M. The compds. I can induce the biosynthesis of various cytokines, and are useful in the treatment of a variety of conditions, including viral diseases and neoplastic diseases.

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T 436855-82-2P 436855-84-4P 436855-87-7P 436855-91-3P 436855-95-7P 436855-97-9P 436855-99-1P 436856-00-7P 436856-01-8P 436856-02-9P 436856-03-0P 436856-04-1P 436856-05-2P 436856-06-3P 436856-07-4P 436856-08-5P 436856-09-6P 436856-10-9P 436856-11-0P 436856-12-1P 436856-13-2P 436856-14-3P 436856-15-4P 436856-16-5P 436856-42-7P 436856-42-7P 436856-42-7P 436856-42-9P 436856-45-59-9P 436856-48-3P 436856-56-3P 436856-58-5P
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436856-60-9P 436856-62-1P 436856-64-3P 436856-66-5P 436856-68-7P 436856-70-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of amido ether substituted imidazoquinolines as immune response modifiers)

RN 436855-82-2 CAPLUS

CN Benzamide, N-[2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ \parallel \\ \text{Ph-C-NH-CH}_2 - \text{CH}_2 - \text{O-CH}_2 - \text{CH}_2 \\ \text{MeO-CH}_2 - \text{CH}_2 \\ \parallel \\ \text{N} \\ \end{array} \begin{array}{c} \text{NH}_2 \\ \end{array}$$

RN 436855-84-4 CAPLUS

CN Benzamide, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436855-87-7 CAPLUS

CN Benzamide, N-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

RN 436855-91-3 CAPLUS

CN Benzamide, N-[2-[2-[4-amino-6,7,8,9-tetrahydro-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-N-methyl- (9CI) (CA INDEX NAME)

Pentanamide, 5-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]-N-methyl-N-phenyl- (9CI) (CA INDEX NAME)

RN

436855-97-9 CAPLUS
Pentanamide, 5-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]-N-butyl-N-phenyl- (9CI) (CA INDEX NAME) CN

436855-99-1 CAPLUS RN

Acetic acid, [2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)butoxy]-, methyl ester (9CI) (CA INDEX NAME) CN

436856-00-7 CAPLUS RN

 $\label{lem:cyclopropanetarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-mino-2-$ CN c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

NH2

RN

436856-01-8 CAPLUS
Pentanamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

$$\begin{array}{c} \text{O} \\ \text{II} \\ \text{n-Bu-C-NH-CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2 \\ \text{n-Bu} \\ \text{N} \\ \text$$

RN 436856-02-9 CAPLUS

Cyclopentanecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

RN 436856-03-0 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-04-1 CAPLUS

CN Cyclohexanecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-05-2 CAPLUS

CN Benzeneacetamide, N-[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-06-3 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-4-fluoro- (9CI) (CA INDEX NAME)

RN 436856-07-4 CAPLUS

CN

2-Thiopheneacetamide, N-[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN

436856-08-5 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-cyano- (9CI) (CA INDEX NAME) CN

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RN

436856-09-6 CAPLUS
Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-cyano- (9CI) (CA INDEX NAME) CN

RN

436856-10-9 CAPLUS Benzenepropanamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O \\ \parallel \\ Ph-CH_2-CH_2-C-NH-CH_2-CH_2-O-CH_2-CH_2 \\ \hline \\ n-Bu \\ N \\ \hline \\ NH_2 \end{array}$$

436856-11-0 CAPLUS RN

Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-methoxy- (9CI) (CA INDEX NAME) CN

RN

436856-12-1 CAPLUS Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-methoxy- (9CI) (CA INDEX NAME) CN

CN

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RN 436856-13-2 CAPLUS

3-Pyridinecarboxamide, N-[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-6-chloro- (9CI) (CA INDEX NAME)

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RN 436856-14-3 CAPLUS

CN Cyclopropanecarboxamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-2-phenyl-, (1R,2R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN

436856-15-4 CAPLUS
Acetamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME) CN

436856-16-5 CAPLUS

1-Naphthalenecarboxamide, N-[2-[2-(4-amino-2-butyl-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME) CN

RN 436856-17-6 CAPLUS
CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-(trifluoromethyl)- (9CI) (CA INDEX NAME)

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RN 436856-18-7 CAPLUS
CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)

RN 436856-19-8 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-(trifluoromethoxy)- (9CI) (CA INDEX NAME)

RN 436856-42-7 CAPLUS

CN Pentanamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-(9CI) (CA INDEX NAME)

RN 436856-44-9 CAPLUS

RN 436856-46-1 CAPLUS

CN Cyclohexanecarboxamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-48-3 CAPLUS

CN Benzeneacetamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-50-7 CAPLUS

CN 2-Thiopheneacetamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 436856-52-9 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-cyano- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 436856-54-1 CAPLUS

CN Benzenepropanamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

RN 436856-56-3 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-methoxy- (9CI) (CA INDEX NAME)

RN 436856-58-5 CAPLUS

CN Benzamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-methoxy- (9CI) (CA INDEX NAME)

RN CN

436856-60-9 CAPLUS 3-Pyridinecarboxamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-l-yl)ethoxy]ethyl]-6-chloro- (9CI) (CA INDEX NAME)

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RN 436856-62-1 CAPLUS

Acetamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME) CN

2-Naphthalenecarboxamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]- (9CI) (CA INDEX NAME)

436856-66-5 CAPLUS RN

Benzamide, N-[2-[2-(4-amino-lH-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-3-(trifluoromethyl)- (9CI) (CA INDEX NAME) CN

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RN 436856-68-7 CAPLUS

Benzamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-CN

(trifluoromethyl)- (9CI) (CA INDEX NAME)

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RN

CN

436856-70-1 CAPLUS
Benzamide, N-[2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-4-(trifluoromethoxy)- (9CI) (CA INDEX NAME)

436856-84-7P 436856-92-7P 436856-98-3P

436857-12-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of amido ether substituted imidazoquinolines as immune response modifiers)

RN 436856-84-7 CAPLUS

Carbamic acid, [2-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME) CN

436856-92-7 CAPLUS RN

Carbamic acid, [2-[2-(4-amino-1H-imidazo[4,5-c]quinolin-1-yl)ethoxy]ethyl]-CN , 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

436856-98-3 CAPLUS RN

Carbamic acid, [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethoxy]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME) CN

RN 436857-12-4 CAPLUS

 $\label{lem:carbamic acid} \text{Carbamic acid, } [2-[2-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-decomposition of the context of$ 1-yl]ethoxy]ethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

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